Australian Standard®

Fire—Glossary of terms

Part 1: Fire tests

This Australian Standard was prepared by Committee FC/—, Fire Coordination. It was approved on behalf of the Council of Standards Australia on 19 December 1989 and published on 7 May 1990.

The following interests are represented on Committee FC/—:

CSIRO, Division of Housing, Construction and Engineering
BD/1/2—Design For Fire
BD/4/8—Design Against Fire
BD/18—Fire Tests—Building Materials, Components, Structures
EL/2/10—Electrical Approvals—Plastics Subcommittee
EL/3/13—Cables for Use in Limited Fire Conditions
FP/—Fire Protection and Fire Fighting Equipment
FP/2—Automatic Fire Detection and Alarm Systems
FP/3—Fire Extinguishers
FP/4—Automatic Sprinkler Installations
FP/5—Fire Hose Reels
TX/13—Burning Behaviour of Textiles and Textile Products
Telecom Australia

This Standard was issued in draft form for comment as DR 88115.

Australian Standard®

Fire—Glossary of terms

Part 1: Fire tests

First published as AS 2484—1981.
Revised and redesignated as AS 2484.1—1990.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140
ISBN 0 7262 6095 9

PREFACE

This Standard was prepared by the Standards Australia Committee on Fire Coordination to supersede AS 2484—1981, *Glossary of terms relating to fire tests.* During its preparation, reference was made to the following documents, and where relevant they are referred to appropriately:

AS	
1530	Methods of fire tests on building materials, components and structures
1530.1	Part 1: Combustibility test for materials
1530.4	Part 4: Fire-resistance tests of elements of construction
1886	Glossary of terms relating to plastics
2122	Combustion propagation characteristics of plastics
2122.1	Part 1: Determination of flame propagation following surface ignition of vertically oriented specimens of cellular plastics
2484	Fire—Glossary of terms relating to fire tests
2484.2	Part 2: Fire protection and firefighting equipment
3600	Concrete structures
ISO TAG 5	N50 Unified glossary of terms—Fire tests (Draft ISO/IEC guide)

Committees which were the source of various definitions are identified in parenthesis throughout the glossary, as follows:

BD/2	Concrete Structures, (Standards Australia).
FC/—	Fire Coordination, (Standards Australia).
ISO/TAG5	Unified Glossary—Fire tests, (ISO).
ISO/TC38	Textiles, (ISO).

This edition provides terminology to be used in connection with fire testing and also makes reference to terms which may be well known but are deprecated by the committee.

Words or expressions of a descriptive nature are not considered acceptable for use in fire terminology where they may be misinterpreted or misused. Terms are classed as *deprecated terms* where they —

(a) make claims that cannot be substantiated, such as ‘fire-proofness’;
(b) are likely to give a misleading impression of performance, such as ‘self-extinguishing’, ‘non- burning’ and ‘non-flammable’;
(c) contain implied judgement of relative performance, such as ‘slow burning’, ‘low-flammability’; or
(d) have been superseded by another term, e.g. ’spontaneous ignition’ has been replaced by ‘self-induced ignition’.

These unacceptable terms imply some unspecified level of quality, property or characteristic.

Words or phrases which indicate some quality, property or characteristic in a manner which does not imply whether that quality, property or characteristic is good or bad, or acceptable or unacceptable, or ascribe any degree or magnitude, should be used. Words such as ‘burning’, ‘combustion’, ‘flaming’ ‘ignition’, ‘incandescence’, and ‘smouldering’, for example, are neutral in this regard and therefore acceptable terms.

Deprecated terms are noted in this glossary without definitions. Where a term is deprecated and there is no sensible alternative, none is given; where a definite alternative term is available it is shown.

A number of commonly used terms listed in Appendix A were considered by the committee, but were rejected as being unnecessary for inclusion in the glossary. The primary reasons for inclusion in Appendix A are as follows:

(a) The term is self-evident and does not need defining.
(b) The term represents a grammatical extension or alternative to an included term.
(c) The term is not used in Australia.
(d) The term is defined in AS 2484.2.

STANDARDS AUSTRALIA

Australian Standard
Fire—Glossary of terms

Part 1: Fire tests

Term	Definition and source
actual calorific value specific heat release	The calorific energy which is released by the combustion of a unit quantity of a material under specified test conditions. (FC/—) NOTE: This is not a unique or fundamental value, but will be a function of the test method.
afterflame duration of flame	Persistence of flaming of a material under specified test conditions, after the ignition source has been removed. (ISO/TAG 5-N50)
afterglow	Persistence of glowing of a material, under specified test conditions, after cessation of flaming or, if no flaming occurs, after removal of the ignition source. (ISO/TAG 5-N50)
ash	Mineral residues produced by complete combustion. (ISO/TAG 5-N50)
attenuation	The loss of power, suffered by radiation, when passing through matter (FC/—)
auto extinguishability (*deprecated* ISO/TAG 5-N50)	
auto ignition (*deprecated* FC/—)	*See* self induced ignition.
base burn (*deprecated* ISO/TC 38)	
burn (intransitive verb)	To undergo combustion. (ISO/TAG 5-N50.)
burned length/area/volume	*See* extent of combustion.
burning behaviour	All the physical or chemical changes, or both, that take place when materials, products or structures burn. (FC/—)
calorific potential heat of combustion	The calorific energy which could be released by the complete combustion of a unit mass of a material. (ISO/TAG 5-N50)
carbonization	The formation of carbon from organic matter (FC/—)
char (verb)	To form carbonaceous residue during pyrolysis or incomplete combustion. (ISO/TAG 5-N50)
combustible	Adjectival form of combustion; *deprecated* except for use in AS 1530.1.
combustion	Exothermic reaction of a substance with an oxidizer, accompanied by flames, or glowing, or emission of smoke. (ISO/TAG 5-N50) NOTE: Oxidation of hydrogen emits radiation outside the visible spectrum but is included in this definition.
combustion spontaneous (*deprecated* ISO/TAG 5-N5O)	*See* self-induced ignition
conduction (of heat)	The flow of heat through a body by the transference of energy from molecule to molecule without mixing. (FC/—)
convection (of heat)	The transference of heat by the circulation or movement of the heated parts of liquid or gas. (FC/—)
crib	A specified arrangement of pieces of fuel, designed to provide a reproducible fire. (FC/—) NOTE: The pieces of fuel, usually of defined type and moisture content, are used with air gaps between.
damaged length/area/volume	*See* extent of damage.
deflagration	An explosion propagating at sub-sonic velocity not characterized by a shock wave. (FC/—)